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CLAIMS

1. A dispensing circuit for dyes, inks, paints or similar fluids, comprising pump means (12) including a variable-volume chamber (66) with at least one flexible wall, the pump means (12) communicating with at least one nozzle (18) through an output duct (72) and a delivery duct (16) for dispensing the fluids, wherein a first one-way valve (94) is disposed in said output duct (72), characterized in that a second one-way valves (14) is mounted in series with said first one-way valve (94) in said delivery duct (16) between said first one-way valve (94) and said at least one nozzle (18).

2. A dispensing circuit according to Claim 1, in which the pump means (12) comprise a main body (64) which delimits the variable-volume chamber (66) at least partially, characterized in that said output duct (72) is formed partially inside the main body (64) and said delivery duct (16) extends partially outside said main body (64).

3. A dispensing circuit according to Claim 2, characterized in that the at least one of the two one-way valves (14, 94) that is mounted in the output duct comprises a hollow body (32), a closure member (52) mounted movably inside the hollow body (32), the closure member (52) comprising a flat abutment surface (54), an abutment inside the hollow body comprising the ridge of a knife-edged element (48a) shaped for bearing against the flat abutment (54), and resilient means (56) associated with the closure member (52) for pressing it against the knife-edged element (48a).

4. A dispensing circuit according to Claims 1 to 3, characterized in that a filter (44) is mounted externally upstream of the at least one of the two one-way valves (14, 94).

5. A dispensing circuit according to Claim 3, characterized in that at least one of the two one-way valves (14, 94) that are mounted in the output duct (16, 72) comprises a filter.

6. A dispensing circuit according to Claim 3, characterized in that the at least one of the two one-way valves (14, 94) that is mounted in the output duct (16, 72) comprises resilient sealing means (63) interposed between the flat abutment surface (54) and the ridge of the knife-edged element (48a).

7. A dispensing circuit according to Claims 1 to 3, characterized in that the variable-volume chamber (66) also communicates with an inlet duct (70), a third one-way valve (74) which is partially open in the rest position being mounted in the inlet duct (70).

8. A dispensing circuit according to Claim 7, characterized in that said third one-way valve (74) has a travel which is different from the travel of at least one of said first and second two one-way valves (14, 94).

9. A dispensing circuit according to Claim 7, characterized in that each of said first and second one-way valves (14, 94) and said third one-way valve (74) comprises a hollow body (70, 72, 88), a closure member (76) mounted movably inside the hollow body (70, 72, 88), the closure member (76) comprising a fiat abutment surface (54), an abutment inside the hollow body comprising the ridge of a knife-edged element (48a) shaped for bearing against the flat abutment surface (54), and resilient means mounted between the closure member and the hollow body.

10. A dispensing circuit, according to any one of the preceding claims, characterized in that the pump means (12) comprise a bellows pump (66).

11. A machine for dispensing dyes, inks, paints or similar fluid products, comprising at least one reservoir (102) of products to be dispensed, characterized in that it comprises at least one dispensing circuit (10) according to any one of the preceding claims, and in that said pump means (12) are connected to the at least one reservoir (102).

12. A dispensing machine according to Claim 11, characterized in that it comprises a control system (106) for controlling the pump means (12) so as to deliver a predetermined quantity of fluid.